

First report on the leafhopper genus *Caknesia* Dworakowska (Hemiptera: Cicadellidae: Typhlocybinae: Typhlocybini) from China, with description of a new species

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Abstract

The Oriental leafhopper genus *Caknesia* Dworakowska is reported for the first time from China. One new species, *C. sichuanensis* sp. nov., from Sichuan of China, is described and illustrated; a key to all species, based on the male genitalia, is given. The type specimens are deposited in the collections of the Entomological Museum, Northwest A&F University, Yangling, China.

Key words: Hemiptera, Cicadellidae, Typhlocybinae, *Caknesia*, new record, new species, China

Introduction

The typhlocybine leafhopper genus *Caknesia* was erected by Dworakowska (1994) to accommodate two new species, *C. glarusa* and *C. wajha* from Sikkim, with the latter as its type species. There have been no further reports on this genus. Here, we record *Caknesia* from China for the first time based on a new species, *C. sichuanensis*, which we describe. The type specimens of the new species are deposited in the collections of the Entomological Museum, Northwest A&F University, Yangling, China.

Caknesia Dworakowska

Caknesia Dworakowska 1994: 135

Type species: *Caknesia wajha* Dworakowska

Description

Brown or blackish brown, with distinct color pattern on upper side of the body. Hindwing membrane fuscous darkest in c and r cell

Body slim. Face broad, lateral frontal sutures incomplete, ocelli present or vestigial. Head nearly as wide as pronotum, crown length about 1/2 pronotal length. Coronal suture distinct, exceeding half length of crown. Forewing slightly broadened subapically, occupying more than 1/3 of whole wing; 1st apical cell smallest, 2nd largest, 3rd stalked, with petiole about 1/3 length to MP; clavus with two anal veins distinct. Hindwing with three transverse veins.

Abdominal apodemes not exceeding 5th sternite.

Male genitalia: Genital capsule cylindrical. Pygofer lobe with numerous long, fine microsetae, mostly on ventral part and centrally, and several small rigid microsetae on posterior margin; posterior margin lamellate with sclerotized extension bent mesad. Subgenital plate well pigmented, adorned with sculpture of large scales; setosity consisting of one macroseta near base, row of small fine microsetae over distal 2/3 length centrally and several others laterobasally conjoining with a row of small, rigid setae around apex; Connective small, lamellate. Paramere slender, with row of setae on outer margin and row of sensory pits on inner margin near base of caudal part. Aedeagus large, with prominent dorsal apodeme, broad atrium, tubular stem, paired processes and gonopore terminal.

Distribution

SW China (Sichuan), India (Sikkim).

Key to males of *Caknesia*

- 1 Face mainly yellowish; pygofer with bent extension on lower part of posterior margin *C. glarusa*
- Face black or blackish brown; pygofer with bent extension on upper part of posterior margin (Figs 6, 14) 2
- 2 Aedeagal shaft with apical processes (Fig. 15) *C. wajha*
- Aedeagal shaft with basal processes (Fig. 13) *C. sichuanensis*

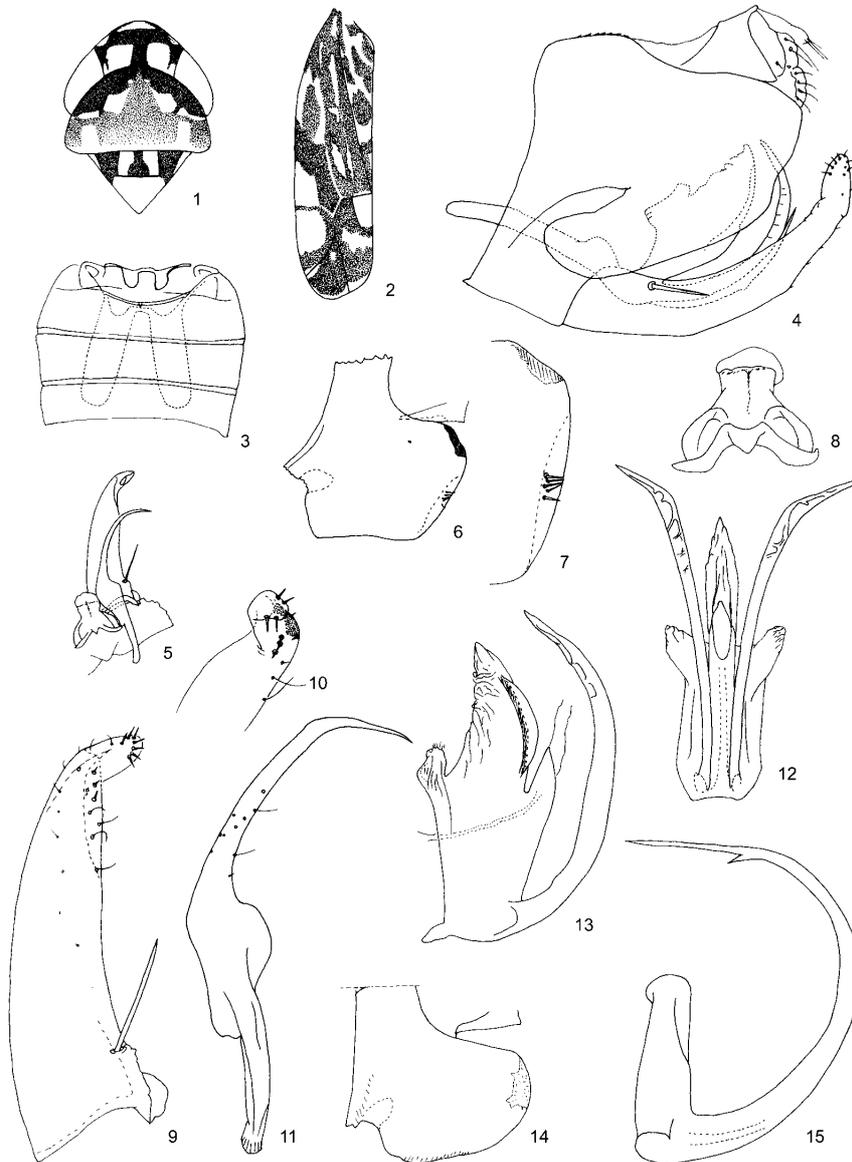
***Caknesia sichuanensis* sp. nov.**

Figs 1–13

Description

Head and upper side of thorax blackish brown, with yellow pattern as in Fig.1. Face blackish brown, antennae yellowish. Ocelli not clearly visible. Abdomen black, with two

light spots on 7th and 8th sternites medially. Legs yellowish. Forewing mostly brown, with whitish pattern on clavus, basal 2/3 of corium and remaining apical 1/3 (Fig.2). Veins AA, CuA, and M (except apically), yellowish. Dark patch on light wax-field varying in length intraspecifically.



FIGURES 1–15. 1–13: *C. sichuanensis* sp.nov. 1. Head, pronotum and scutellum in dorsal view. 2. Forewing. 3. Abdominal apodemes. 4. Male genital capsule, lateral view. 5. Paramere, connective, subgenital plate and sternite 9, dorsal view. 6. Male pygofer, lateral view. 7. Hind part of male pygofer, lateral view. 8. Connective. 9. Subgenital plate, dorsal view. 10. Apical part of subgenital plate. 11. Paramere. 12. Aedeagus, posterior view. 13. Aedeagus, lateral view. 14–15: *C. wajha* (after Dworakowska, 1994). 14. Male pygofer, lateral view. 15. Aedeagus, lateral view.

Male genitalia: Pygofer lobe with bent mesad extension on upper angle (Figs 6, 7). Subgenital plate gradually narrowing from base to apex, with termination narrowed, bend dorsad (Figs 9, 10). Caudal part of paramere tapering and somewhat sinuate, slightly broadened subapically (Fig.11). Aedeagus with subtriangular protrusion between dorsal apodeme and shaft (Fig.13); shaft short, with a pair of long processes arising basally, decorated with sculpture on distal 1/3 (Fig.12).

Measurement: Male 2.91 mm, female 2.88 mm long, including tegmen.

Type materials

Holotype: ♂, CHINA: Sichuan province: Mt. Emei, Alt. 1600 m, on Urticaceae, 31. x. 1999, coll. I. Dworakowska; paratypes, 4♂25♀, same date as holotype; 1♂, Alt. 800 m, 30. x. 1999; 1♀, Alt. 1300 m, 1. xi. 1999; 1♂, Alt. 600 m, 2. xi. 1999; 1♂, Alt. 700 m, 2. xi. 1999; all of above coll. I. Dworakowska; 1♀, Qingyingge, Alt. 1600 m, 11. ix. 1988, coll. Shulin ZHENG, Qiuyuan XU and Jingruo ZHOU.

Notes

The new species resembles *C. wajha* in color pattern, but can be distinguished from the latter by the structure of the male genitalia. In the new species the mesal protrusion of pygofer lobe is smaller and situated on the caudo-dorsal angle (Figs 6, 14); and its aedeagal shaft is short, with a membranous termination, paired long basal processes, and an unpaired large dorsal protrusion (Figs 13, 15).

Etymology

The specific name refers to the type locality of the species (Sichuan province).

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References

Dworakowska, I. (1994) Typhlocybinæ (Auchenorrhyncha, Cicadellidae) of Sikkim, a preliminary survey. *Folia Entomologica Hungarica*, 55, 93–215.